CLAIM AMENDMENTS

1. (Currently Amended) An isolated nucleic acid molecule comprising a polynucleotide selected from ~~the~~ a group consisting of:
(a) a polynucleotide encoding amino acids from about 1 to about 188 of the amino acid sequence contained in Figure 1;
(b) a polynucleotide encoding amino acids from about 2 to about 188 of the amino acid sequence contained in Figure 1;
(c) the polynucleotide complement of the polynucleotide of (a) or (b); and
(d) ~~(c)~~ a polynucleotide at least 90% identical to the polynucleotide of (a), (b) or (c).

2. (Original) An isolated nucleic acid molecule comprising about 10 to about 564 contiguous nucleotides from the coding region identified in Figure 1.

3. (Original) An isolated nucleic acid molecule comprising about 50 to about 564 contiguous nucleotides from the coding region of the nucleic acid sequence in Figure 1.

4. (Original) An isolated nucleic acid molecule comprising about 100 to about 400 contiguous nucleotides of the coding region of the nucleic acid sequence contained in Figure 1.

5. (Original) An isolated nucleic acid molecule comprising about 10 to about 564 contiguous nucleotides from the coding region contained in Figure 1.

6. (Currently Amended) An isolated nucleic acid molecule comprising a polynucleotide encoding a polypeptide wherein, except for at least one conservative amino acid substitution, addition, or deletion, said polypeptide has an amino acid sequence selected from the group consisting of:
(a) amino acids from about 1 to about 188 of the amino acid sequence in Figure 1; and
(b) amino acids from about 2 to about 188 of the amino acid sequence in Figure 1.

7. (Currently Amended) The isolated nucleic acid molecule of claim 1, which is cDNA.

8. (Currently Amended) ~~A method of making a~~ recombinant vector comprising ~~inserting a~~ the nucleic acid molecule of claim 1 ~~into~~ and a vector in operable linkage to a promoter.

9. (Canceled)

10. (Currently Amended) A ~~method of making a~~ recombinant host cell comprising ~~introducing~~ the recombinant vector of claim ~~9~~ 8 ~~into~~ and a host cell.

11. (Canceled)

12. (Canceled)

13. (Currently Amended) An isolated polypeptide comprising amino acids at least 95% identical to amino acids encoded by the nucleic acid of claim 1. ~~selected from the group consisting of: (a) amino acids from about 1 to about 188 of the amino acid sequence contained in Figure 1; and (b) amino acids from about 2 to about 188 of the open amino acid sequence contained in Figure 1.~~

14. (Currently Amended) An isolated polypeptide wherein, except for at least one conservative amino acid substitution, addition, or deletion, said polypeptide has an amino acid sequence encoded by the nucleic acid of claim 6 ~~selected from the group consisting of: (a) amino acids from about 1 to about 188 of the amino acid sequence in Figure 1; and (b) amino acids from about 2 to about 188 of the amino acid sequence in Figure 1.~~

15. (Canceled)

16. (Currently Amended) An epitope-bearing portion of the polypeptide of any one of claims 13 or 14. ~~identified in Figure 1.~~

17. (Original) The epitope-bearing portion of claim 16, which comprises about 5 to about 30 contiguous amino acids of the protein of Figure 1.

18. (Original) The epitope-bearing portion of claim 17, which comprises about 10 to about 15 contiguous amino acids of the protein of Figure 1.

19. (Currently Amended) An isolated antibody that binds specifically to the polypeptide of claim 13 ~~15~~.

20. (Original) A monoclonal antibody according to claim 19.

Claims 21-42: Canceled

43. (New) An agent that inhibits the expression of the polypeptide of claim 13 or 14 in a cell, wherein the agent is selected from a group consisting of antisense oligonucleotides, ribozymes, and siRNA.

44. (New) The antisense oligonucleotide of claim 43 that has a phosphodiester backbone or modified base composition.

45. (New) A method of inhibiting apoptosis or proliferation of cancer cell, comprising inhibiting expression of SCC-S2 in said mammalian cell by transforming the cell with the vector of claim 8.

46. (New) A method of treating cancer characterized by SCC-S2 over-expression by administering one or more agents of claim 43.

47. (New) A method of treating cancer characterized by SCC-S2 over-expression comprising administering the antibody of claim 19.

48. (New) The method of claim 46 further comprising the administration of radiation, radionucleides, anticancer drugs or other biological agents.

49. The method of claim 47 further comprising the administration of radiation, radionucleides, anticancer drugs or other biological agents.

50. (New) A method of detecting cancer characterized by SCC-S2 over-expression comprising detecting the levels of SCC-S2 expression and correlating said level of expression to the presence or absence of cancer, wherein the method is effected by using the cDNA of claim 7 or the antibody of claim 19.

51. (New) A method for identifying small molecule inhibitors of the SCC-S2 protein represented by the polypeptide of claim 13 or 14, wherein the method comprises the steps of:
(a) determining a three dimensional structure of the SCC-S2 protein;
(b) identifying an active site in the structure determined in step (a);
(c) computationally screening a database of compounds to identify molecules that fit in the active site of the protein and selecting the molecules with the highest calculated binding affinity to the protein; and
(d) testing in vitro with SCC-S2 inhibitory activity of the molecules selected in step (c) and identifying one or more SCC-S2 inhibitors.

52. (New) The method of claim 51, wherein determining the three dimensional structure of the SCC-S2 protein comprises determining the structure through X-ray crystallography.

53. (New) The method of claim 51, wherein determining the three dimensional structure of the SCC-S2 protein comprises identifying a protein of known structure that is homologous to SCC-S2 and modeling the structure of the SCC-S2 protein based on the structure of the homologous protein.

54. (New) A small molecule inhibitor identified by the method of claim 51.

55. (New) A method for designing small molecule inhibitors of the SCC-S2 protein represented by the polypeptide of claim 13 or 14, wherein the method comprises the steps of:

(a) determining a three dimensional structure of the SCC-S2 protein;
(b) identifying an active site in the structure determined in step (a);
(c) computationally modeling a compound that is complementary to the active site of the SCC-S2 protein; and
(d) testing in vitro the SCC-S2 inhibitory activity of the molecules selected in step (c) and identifying one or more SCC-S2 inhibitors.

56. (New) The method of claim 55, wherein determining the three dimensional structure of the SCC-S2 protein comprises determining the structure through X-ray crystallography.

57. (New) The method of claim 55, wherein determining the three dimensional structure of the SCC-S2 protein comprises identifying a protein of known structure that is homologous to SCC-S2 and modeling the structure of the SCC-S2 protein based on the structure of the homologous protein.

58. (New) A method for inhibiting cancer cell proliferation and/or metastasis in a cancer patient comprising administering to the patient a therapeutically effective amount of the small molecule inhibitor of claim 54.

59. (New) A method for inhibiting cancer cell proliferation and/or metastasis in a cancer patient comprising administering to the patient a therapeutically effective amount of the small molecule inhibitor of the antibody of claim 19.

60. (New) A method for inhibiting cancer cell proliferation and/or metastasis in a cancer patient comprising administering to the patient a therapeutically effective amount of the small molecule inhibitor of the antibody of one of the agents of claim 43.

61. (New) A method for determining the degree of tumor growth administering the small molecule inhibitor of claim 54 and determining the degree of tumor growth and metastasis prior to and after administering the small molecule inhibitor.